

Claims:

1. Process for the production of DTPA-bis(anhydride) characterized in that DTPA is reacted with acetic anhydride in pyridine under elevated temperature and that the molar amount of pyridine is equal to or less than 6 times the molar amount of DTPA.
- 5        2. Process of claim 1 wherein the molar amount of pyridine is equal to or less than 3 times the molar amount of DTPA.
- 10      3. Process of claim 1 wherein the molar amount of pyridine is equal to or less than 1 time the molar amount of DTPA.
- 15      4. Process of claim 1 wherein the molar amount of pyridine is at least 0.5 times the molar amount of DTPA.
- 20      5. Process of claims 1 to 3 wherein the molar amount of pyridine is approximately the same as the molar amount of DTPA.
- 25      6. Process of claims 1 to 5 wherein the molar amount of acetic anhydride is in excess of the molar amount of DTPA.
- 30      7. Process of claim 6 wherein the molar amount of acetic anhydride is more than 7 times the molar amount of DTPA.
- 35      8. Process of claim 6 wherein the molar amount of acetic anhydride is more than 5 times the molar amount of DTPA.
- 40      9. Process of claim 6 wherein the molar amount of acetic anhydride is more than 3 times the molar amount of DTPA.
- 45      10. Process of claim 6 wherein the molar amount of acetic anhydride is more than 2 times the molar amount of DTPA.
- 50      11. Process of claim 6 wherein the molar amount of acetic anhydride is about 3 times the molar amount of DTPA.

12. Process of claims 1 to 3, 5 and 9 to 11 wherein the molar amount of acetic anhydride is about 3 times the molar amount of DTPA and the amount of pyridine is approximately the same as the molar amount of DTPA.

5 13. Process of the preceding claims wherein the reaction temperature is above 65°C.

14. Process of the preceding claims wherein the reaction temperature is above 70°C.

10 15. Process of the preceding claims wherein the reaction temperature is at 80°C or above.

15 16. Process of claims 1 to 3, 5 and 9 to 11 and 16 wherein the molar amount of acetic anhydride is about 3 times the molar amount of DTPA, the amount of pyridine is approximately the same as the molar amount of DTPA and wherein the reaction temperature is approximately 80°C.

17. DTPA-bis(anhydride) characterized in being produced by the process of the preceding claims.

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